

Amendment to the Claims:

The claims under examination in this application, including their current status and changes made in this paper, are respectfully presented.

Claims 1 through 39 are canceled.

40 (original). In a bi-directional data transmission system that facilitates communications between a plurality of remote units and a central unit using a frame based discrete multi-carrier transmission scheme that has a multiplicity of discrete sub-channels provided for facilitating upstream communications between the plurality of remote units and the central unit, a method of informing the central unit of the transmission requirements of a remote unit, the method comprising the steps of: transmitting a data transmission request signal from a selected first remote to the central unit during a particular symbol in a data frame that is associated with the selected first remote unit on at least one sub-channel that are not otherwise in use by any of the remote units; transmitting data request information from the selected first remote to the central unit simultaneously with the data-transmission request signal over a plurality of the discrete sub-channels that are not in use; and allocating at least one sub-channel to the selected first remote unit in response to the data request information for facilitating upstream communications between the first remote unit and the central unit.

41 (original). In a bi-directional data transmission system that facilitates communications between a plurality of remote units and a central unit using a frame based discrete multi-carrier transmission scheme that has a multiplicity of discrete sub-channels provided for facilitating upstream communications between the plurality of remote units and the central unit, a method of informing the central unit of the transmission requirements of a remote unit, the method comprising the steps of: transmitting a data transmission request from a selected first remote to the central unit, wherein the data transmission request indicates whether a particular data rate is requested or whether a designated amount of information is desired to be transmitted; allocating

at least one sub-channel to the selected first remote unit in response to the data transmission request for facilitating upstream communications between the first remote unit and the central unit, wherein when a particular data rate is requested, the central unit allocates sufficient sub-channels to the selected first remote unit such that the selected first remote unit can transmit at the requested data rate and wherein the designated amount of information is desired to be transmitted, the central unit allocates the at least one sub-channel to the selected first remote unit for an amount of time sufficient to transmit the designated amount information.

Claims 42 through 52 are canceled.

53 (currently amended). In a bi-directional data transmission system that facilitates communications between a plurality of remote units and a central unit using a frame based discrete multi-carrier transmission scheme that has a multiplicity of discrete sub-channels provided for facilitating upstream communications between the plurality of remote units and the central unit and downstream communications between the central unit and the plurality of remotes, a method of transmitting data comprising the steps of:

- a) transmitting at least one frame of downstream data from the central unit to at least one of the remote units using a discrete multi-tone modulation scheme, wherein no upstream data transmissions are permitted during the transmission of the downstream data;
- b) transmitting at least one frame of upstream data from at least one of the remote units to the central unit using a discrete multi-tone modulation scheme, wherein no downstream data transmissions are permitted during the transmission of the upstream data; and
- c) sequentially repeating steps (a) and (b).

54 (original). A method as recited in claim 53 further comprising the step of providing a settling period after the transmission of at least one of the downstream frames and the upstream frame, wherein no transmissions are made in either direction during the settling period.

55 (currently amended). A method as recited in claim 53 or 54 wherein step (a) transmits the downstream data at a data transmission rate of the permissible data transmissions rates are at least ten million bits per second.